

Dryland Legumes

Workshop

*Farmer experiences with increasing
Legume*

Fraser Avery, Bonavaree, Grassmere

Lucerne and Grass Mixes



This work is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

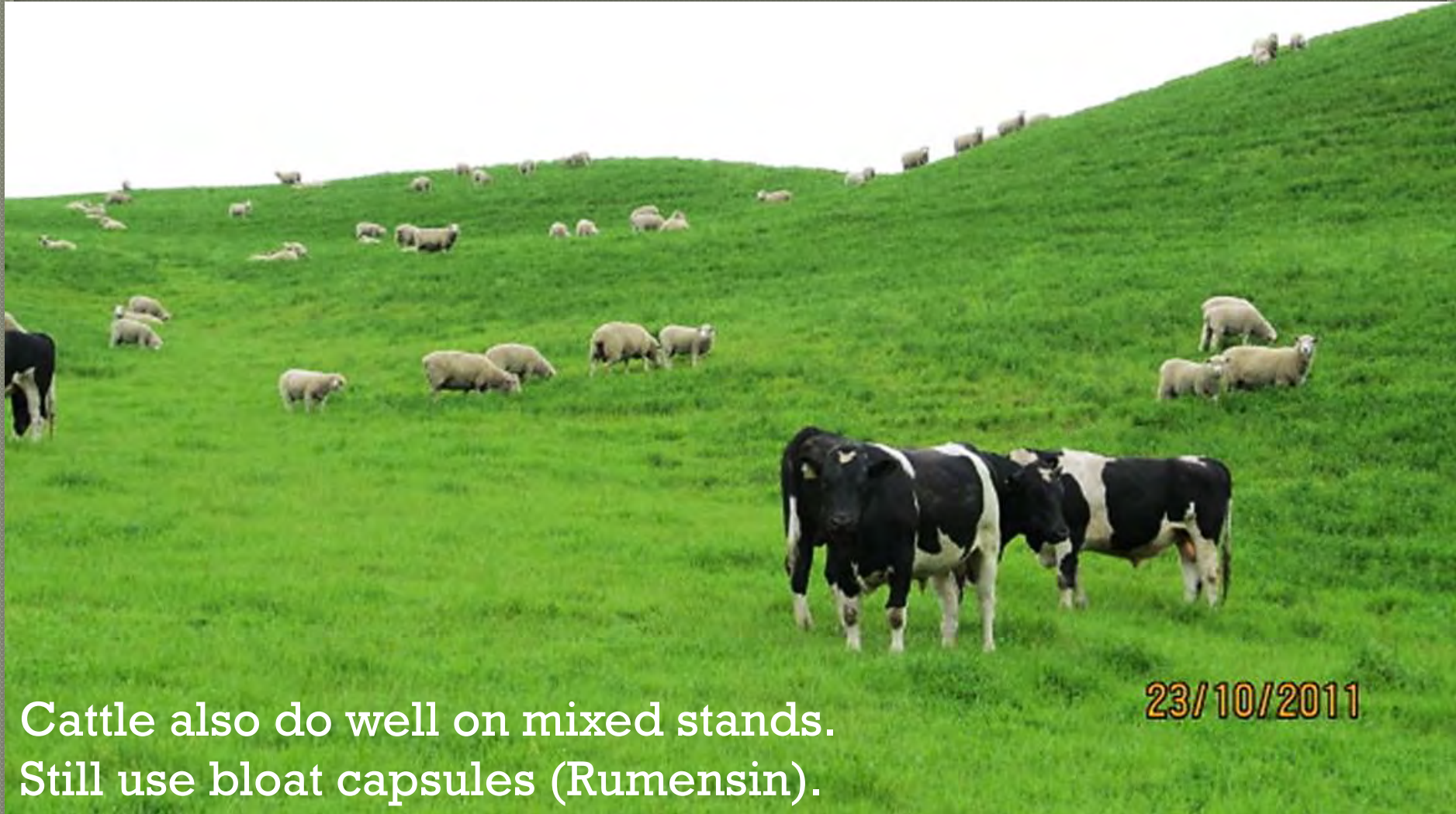


Bonavaree



The Bonavaree mix of Lucerne, Plantain and Prairie Grass is very important part of system, lots of sheep mated on it, and then multiple bearing ewes. Grow on more rolling hill country, because seed is produced on the flat country.

Used for all stock classes



Cattle also do well on mixed stands.
Still use bloat capsules (Rumensin).

23/10/2011

Fraser's House Paddock



25/03/2012

Lucerne + Prairie + Plantain mix. This was planted Spring 2011.

Reasons for using a mixed stand vs. pure Lucerne

The reasons for introducing a Lucerne mix to Bonavaree was due to many reasons:

- A Lucerne and Prairie Grass mix was seen to be working successfully at a visit to Lyndon Matthews, in Waikari.
- Bonavaree has 75 ha of this pasture mix now, and plans to put in another 60 ha of the same this spring.

Reasons for using a mixed stand vs. pure Lucerne

Plant Issues:

- **White Fringe Weevil:**

White Fringe Weevil (WFW) was becoming an issue in some of the pure stands, by introducing a grass and herb (plantain) in the stand it reduced the problem with WFW because it prefers a pure stand of Lucerne.

- **Reduce Chemical costs:**

Lucerne usually requires a significant amount of Herbicides to maintain its productivity. By mixing Lucerne with grass, and herbs, it reduces the number of herbicides you can use on a mixed stand, but also reduces the amount of bare ground which means it doesn't give the weeds a chance to compete.

- **Lengthen life of old stands:**

By bulking up the stand with grass it increases the production (life) of an old stand of Lucerne, which means less re-establishment costs. Usually gives you an extra couple of years.

Reasons for using a mixed stand vs. pure Lucerne

Plant Issues:

● Reduces Toadstool erosion:

Toadstool erosion occurs when the soil around the lucerne plants erodes away leaving a raised collar of dirt around each plant. This occurs in pure stand because there are usually large amounts of bare ground visible at certain times of the year, especially in old stands. By mixing lucerne with other pasture species it bulks up the stand, and reduces bare ground.

● Winter active and drought tolerant grass:

Prairie grass and plantain is winter active, but all species are drought tolerant, so persist in a dryland environment. These plants won't grow in a drought, but will survive, and come away quickly if any rain falls.

Reasons for using a mixed stand vs. pure Lucerne

- **Reduces animal health issues:**

By mixing lucerne with grass and herbs it provides a more balanced diet, reduces issues with red gut and bloat, and other undiagnosed animal health problems seen on pure stands.

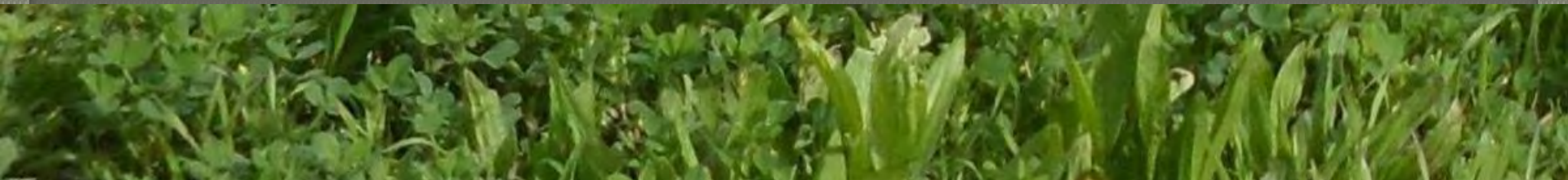
- **Fits system really well:**

Prairie grass is winter active so produces feed when needed by stock...fits system well.

Animal Production – how these paddocks are used

No firm data available on Bonavaree mix paddocks yet, but:

- Mixed Age ewes scanned 198% total on Lucerne and Mix Paddocks.
- Last year ewes were mated and lambed on these paddocks, at tailing the lambs appeared to be at the top end.
- These mixed paddocks are extremely important to Bonavaree's system. Many ewes are mated on these paddocks, and are also used for lambing multiple bearing ewes.



Grazing management

- The mixed paddocks must be grazed and managed for the lucerne component = Intensive management.
- Must be rotationally grazed, e.g. When lambing on these paddocks, only set stocked for 10 days.
- All species were eaten down evenly.
- Allow Prairie Grass and Plantain to set seed in the summer, so seedlings can establish in any bare patches.





Lucerne +
Prairie Grass +
Plantain mixed
stand
(9 months old)

Bonavaree Seed mix

The preferred permanent pasture mix is:

Pasture Species	Sowing Rate
Lucerne	9 kg/ha
Prairie Grass	15 kg/ha
Plantain	1kg/ha

- Sow together in spring, or other option prairie and plantain over old stand lucerne.
- Both options fit.
- Renovating an old lucerne paddock gives you an extra couple of years.
- 75 ha of this mix now. Will put in another 60 ha.

Establishment of Bonavaree mix

Two options, either:

1 - Drill into old stand of pure lucerne

- Important to do a really good winter spray to clean up as many weeds as possible, to reduce competition to establishing plants when sown in spring.
- Late September graze lucerne down hard
- Graze down hard again 35 days later, by then Prairie Grass has emerged at seedling stage.
- Then shut up and go through to set seed.
- Probably won't get another graze till late January



Establishment of Bonavaree mix

Or:

2 – Establish new paddock in spring

- Crop for 2 years to clean paddock of weeds.
- Spray out with Glyphosate and Granstar in mid September and fallow for 1 month.
- Spray with Glyphosate just prior to drilling in mid October .
- Sow seed with 110 kg/ha of Cropmaster 20.
- First graze once Prairie grass has seeded, unless wetter season, in this case first graze at 25 – 30 cm height (usually around new year) then let grass seed before next grazing.



Establishment of Bonavaree mix

*In both systems the key is to reduce all weeds
before establishment.
CLEAN PADDOCKS!*

Reduce all weeds:

The key to successful establishment in both sowing options is to reduce the weed competition as much as possible before establishment, because there are not many chemical mixed that can be used on these mixed species stands.

